When the First Shot has to Count…
Count on Letterkenny

UNITED STATES ARMY
LETTERKENNY ARMY DEPOT

ARMY UID PILOT

ISO 9001 Registered

ISO 14001 Registered

Pilot Asset - Mobile Kitchen Units

FY05 – Start of MKT

UID Production Effort

SUPPORTED BY PRODUCT MANAGER, LTC LAWRENCE SILAS

UID 2D Matrix identified in Technical Data Package

FY05 - 294 Mobile Kitchens (MKTs) Scheduled

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Marking Equipment

Letterkenny Received National Center for Manufacturing Sciences (NCMS) Cart Number 3 in October 2004

- **Computer Controllers (2)**
  - **Windows Based**

- **Marking Technologies:**
  - **Dot Peen**
  - **Electro Chemical Etch**
  - **Laser (Fixed)**

- **Verification Technologies:**
  - **RVSI / Polaroid MXi hand-held**
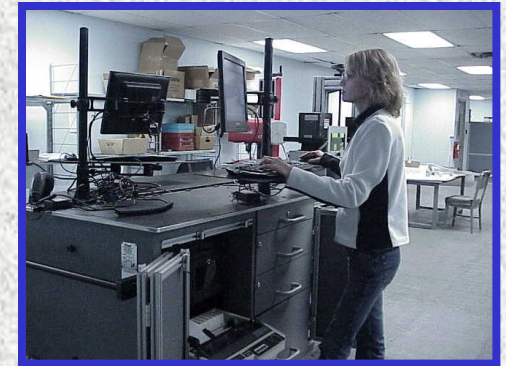   - **Imager**
  - **RVSI / NER MVi Imager**

| NSF-ISR	ISO 9001 Registered
NSF-ISR	ISO 14001 Registered

Cart Price: $250,000+

Training

* **Instructors: 2 Monode Employees**

* **Duration: 2 Days**

* **Employees: Computer Specialist, Engineer, Production Controller, Quality Assurance Inspector**

* **Training Plan:**
  * **Overview & Concepts of 2D Technology**
  * **Overview of Cart and Software**
  * **Demonstration of Each Marking Technology**
  * **Instruction in Use of Marking Machine & Software**
  * **Detailed Software Instruction**
    Prolase – Laser
    Monode Triad - Electro Chemical Etch

Laser Technology
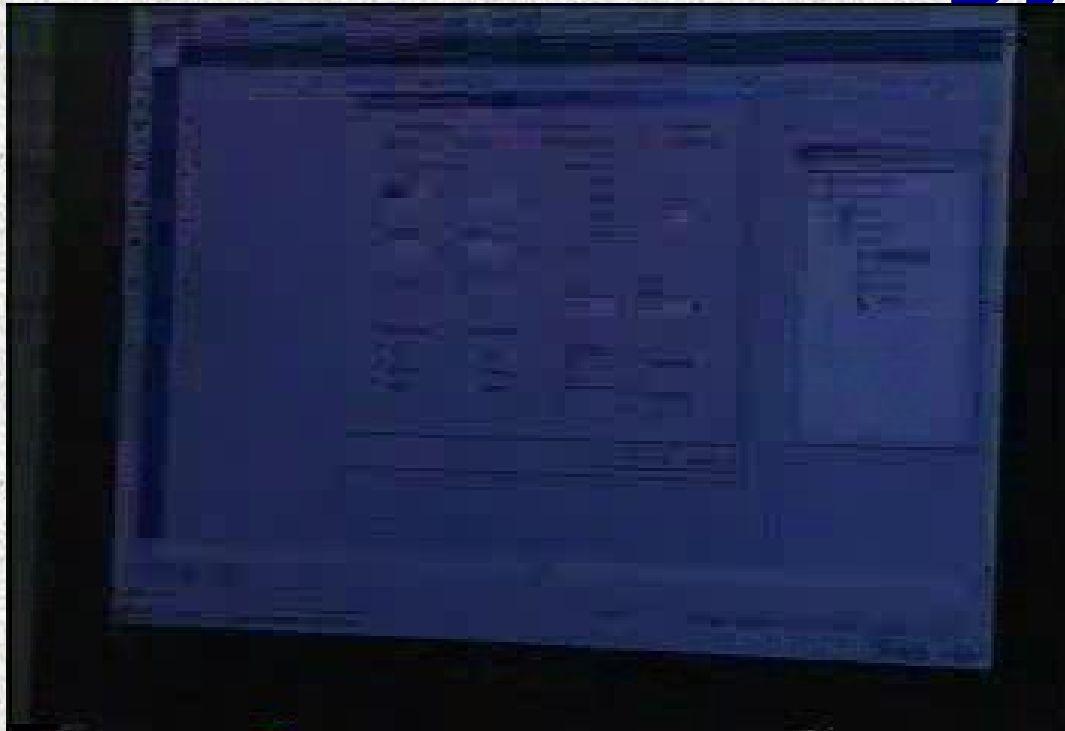
- Single Screen Creation of Graphic Templates for Etching

- Storage & Recall of Templates

- Single Screen Editing of Image

- Single Pass for Etching the UID 2D Data [ ] & Human

 Readable Data

- Quick Setup and Repeatability

ISO 9001 Registered

ISO 14001 Registered

Verification

The Imager Camera and "Monode Verifier" Software are used to Verify and Grade the 2D Data Matrix

MVi Imager

Sample Verifier Screen

LEAD uses the most stringent standard available (US Coast Guard)

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Verification

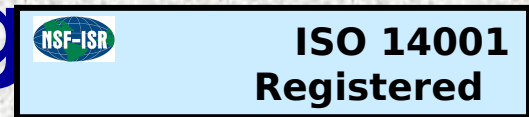**Software automatically places a record in a write-back file**

Operator annotates a "Mark Log"

Record identifies the content and grade information about the UID

Allowance to create reports for the customers.

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Technical Data Package

- TACOM ILSC identified the requirement for UID in the Depot Maintenance Work Requirement (DMWR) for Mobile Kitchen Trailer (MKT) Reset.

- Technical reference for rebuilding the MKT is a DMWR

- Cooperation between the Letterkenny Engineering Staff and TACOM ILSC Engineering Staff determined:

  - A Data Plate is the least intrusive method of getting the 2D Data Matrix UID onto the asset

  - A Data Plate is the quickest method to get the MKT into UID Policy Compliance

  - Laser Technology lends itself to faster setup and etching

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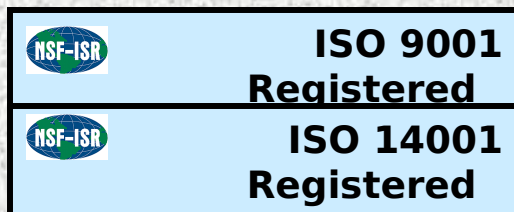
Data Plate

The Original Data Plate was modified to include the UID

- **Boxes proved to be too restrictive to data alignment**

- **Polished backgrounds lacked contrast causing inconsistent scans**

KITCHEN, FIELD, TRAILER, MOUNTED
MOBILE KITCHEN TRAILER
DATE UP-GRADED:
NSN: 7360-01-500-4644
SERIAL NO:
UP-GRADED BY:
CONTRACT NO:

KITCHEN, FIELD, TRAILER, MOUNTED
MOBILE KITCHEN TRAILER
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UP-GRADED BY:
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UID

Original Data Plate Identified in DMWR. Data Plate.

First Generation UID

The Production Data Plate allows for longer data strings

The black background er contrast image

KITCHEN, FIELD, TRAILER, MOUNTED
MOBILE KITCHEN TRAILER
DATE UP-GRADED: 05 JAN 2005
UP-GRADED MODEL NO: MKT-99
NSN: 7360-01-500-4644
SERIAL NO: 830-85
UP-GRADED BY: LETTERKENNY ARMY DEPOT
CONTRACT NO:
UID
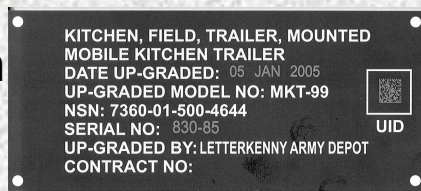
Production ID Data Plates

- **Photographic process is used to create blank plates**

- **Photographic process applies the static information**

ISO 9001 Registered

ISO 14001 Registered

To ensure the uniqueness of a marked item the Construct 2 Guidelines were to used at the Depot Level.

- **Data Identifier: "06"**

- **CAGE Code: "17V"**

- **Original Part Number: "1P"**

- **Serial Number: "S"**
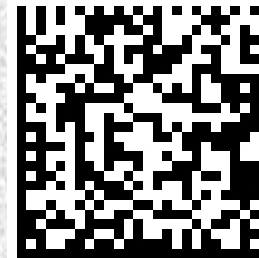
Data Identifier Format Header

Serial Number

[)>~D030**06**~D029**17V**32682~D029**1P**MKT85~D029**S**83085~D030~D004

CAGE CODE

Original Part Number

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Cost Comparison

Fully Burdened Labor Rate = $80

Stamp on Average 12 Plates/Hour
Photographic Data Plate $ 2.42
Hand Stamp Data Plate $ 6.67
Total 9.09

Etch and Verify on Average 20 Plates/Hour
Photographic Data Plate $ 2.42
Etch & Verify Data Plate $ 4.00
Total
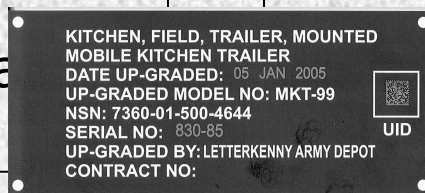
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UID

Savings of $2.67 / Plate

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- **An Excel Spreadsheet is used to track MKT Project**

- **Column Headers identify information as stated in**

  M... **UID Reg**...

Item Description	Unique ID (Concatenated DOD UID or Equiv)	Unique Item Identifier Type	Issuing Agency Code	Enterprise Identifier	Lot or Batch Number	Original Part Number	Current Part Number	Current Part Number Effective Date	Serial Number	Unit of Measure	Gov't Acquisition Cost	Ship-to Code	Contractor's CAGE Code or DUNS Number	Contract Number	Contract Line, Subline or Exhibit Item Number	Acceptance Code	Shipment Date
Kitchen, Field, Trailer Mounted		*06*				*MKT-85*	*MKT-99 or MKT-99 TAN*			*EA*	*$15,185*					*B*	
Kitchen, Field, Trailer Mounted	029S83085~D030~D004	06				MKT-85	MKT-99 TAN		830-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	029S81085~D030~D004	06				MKT-85	MKT-99 TAN		810-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	9S197885~D030~D004	06				MKT-85	MKT-99 TAN		1978-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	029S86885~D030~D004	06				MKT-85	MKT-99 TAN		868-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	029S89685~D030~D004	06				MKT-85	MKT-99 TAN		896-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	9S230685~D030~D004	06				MKT-85	MKT-99 TAN		2306-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	9S167485~D030~D004	06				MKT-85	MKT-99 TAN		1674-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	9S175685~D030~D004	06				MKT-85	MKT-99 TAN		1756-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	029S79485~D030~D004	06				MKT-85	MKT-99 TAN		794-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	9S157485~D030~D004	06				MKT-85	MKT-99 TAN		1574-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	9S157285~D030~D004	06				MKT-85	MKT-99 TAN		1572-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	029S89385~D030~D004	06				MKT-85	MKT-99 TAN		893-85	EA	$15,185		32682			B	
Kitchen, Field, Trailer Mounted	9S103985~D030~D004	06				MKT-85	MKT-99 TAN		1039-85	EA	$15,185		32682			B	

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The Final Product

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| NSF-ISR | ISO 14001 Registered |

❖ **Data Tag is applied During Final Assembly Proc**

Issues

- **Where and how do TDP updates get applied?**

- **Who is the decision maker?**

- **Data plate needs minor redesign.**

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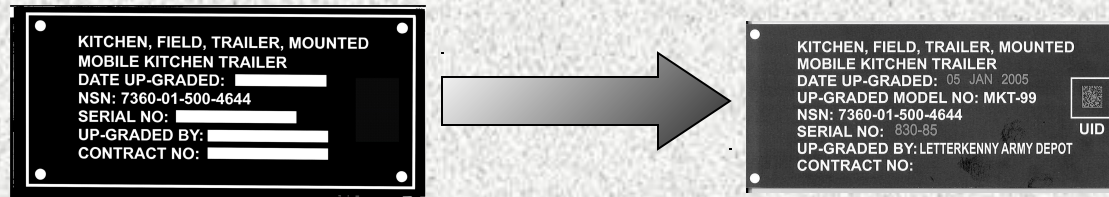
Issues

- **The overall design of the cart limits usage. Lacks large enough work surface for larger parts (engines, transmissions)**

- **Laser and Dot Peen technology needs to be portable. Electro-Chemical Etch is the only portable mark at present time**

- **Durability of 2D Matrix during certain overhaul processes**

- **Inability to read UID mark after surfaces are coated/painted**

??

- **Need direction by Program Managers how to utilize this capability**
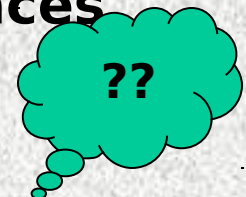
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Where LEAD is now:

➢ **Currently working w/TACOM ILSC. Applying UID 2D Matrix to data plates for the MKTs**

➢ **Discussions underway w/TACOM ILSC concerning the application of the UID 2D Matrix to Force Provider Assets**

➢ **TACOM has opened a dialog w/LEAD concerning application of the UID 2D Matrix to the M939 Armor**

MKT

Containerized systems

Generat. or

ECU

M939 Armor Cab

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What We Do... A Capabilities Base

ISO 9001 Registered

NSF-ISR

ISO 14001 Registered

NSF-ISR

Aviation & Missile Command

PATRIOT RECAP

Hellfire

SECONDARY ITEM REPAIR

ATACMs

HAWK

MLRS

Avenger

TOW

Special Operations Command

Army SF

Navy SEALS

Ranger Ambulance

Army Ranger

Air Force War Pig

UID MARKING OPPORTUNITIES

Joint PEO-Chemical Biological Defense

BIDS M31A2

DFUs

Portal Shield

JBPDS Trailer

Tank-Automotive & Armaments Command

Armor Doors

Truck Boxes

M939 CAB

MKT

HMMWV RECAP

M939 Cab

Force Provider

23 FEB 2005

UNITED STATES ARMY
LETTERKENNY ARMY DEPOT

QUESTIONS?